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NON-DETERMINISTIC TESTING

ABSTRACT

A computerized method creates test coverage for non-deterministic programs. The method receives a graph of edges and states representing a program under test, and creates a continuous cycle of edges that reaches each edge in the graph at least once. In one example, the method splits the continuous cycle into discrete sequences that end at edges reaching non-deterministic nodes in the graph, and verifies that the executing program conforms to the behavior represented by the discrete sequences. In another example, a method creates probabilistic strategies for reaching one or more vertices in a non-deterministic graph. The strategies provide a graph path with a high probability of reaching a desired vertex.